

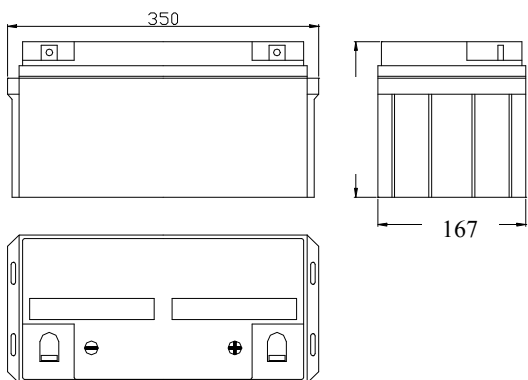
# SH12-65 12V65Ah

**KEMAPOWER ELECTRONICS CO., LTD.**



The battery is constructed by plates, separators, safety valves and container. Since the electrolyte is held by a glassmat separator and plates, the battery can use in any direction and position without leakage.

### Outer Dimensions



### Dimensions and Weight

|                            |              |
|----------------------------|--------------|
| Length ( mm / inch )       | 350 / 13.78  |
| Width ( mm / inch )        | 167 / 6.57   |
| Height ( mm / inch )       | 178 / 7.00   |
| Total Height ( mm / inch ) | 178 / 7.00   |
| Approx.Weight( Kg / lbs )  | 21.0 / 46.20 |

### Performance Characteristics

|  |            |
|--|------------|
| Nominal Voltage                                    | 12V        |
| Number of cell                                     | 6          |
| Design Life  | 10 years   |
| Nominal Capacity 77°F(25°C)                        |            |
| 20 hour rate(3.25A, 10.5V)                         | 65Ah       |
| 10 hour rate(6.04A, 10.5V)                         | 60.4Ah     |
| 5 hour rate (11.08A, 10.5V)                        | 55.4Ah     |
| 1 hour rate(42.25A, 9.6V)                          | 42.25Ah    |
| Internal Resistance                                |            |
| Fully Charged battery 77°F(25°C)                   | 7mΩ        |
| Self-Discharge                                     |            |
| 3% of capacity declined per month at 20°C(average) |            |
| Operation Temperature Range                        |            |
| Discharge  | -20~60°C   |
| Charge   | -10~60°C   |
| Storage  | -20~60°C   |
| Max.Discharge Current 77°F(25°C)                   | 650A(5s)   |
| Short Circuit Current                              | 1950A      |
| Charge Methods:Constant Voltage Charge 77°F(25°C)  |            |
| Cycle use  | 14.5-15.0V |
| Maximum charging current                           | 19.5A      |
| Temperature compensation                           | -30mV/°C   |
| Standby use  | 13.4-13.8V |
| Temperature compensation                           | -20mV/°C   |

### Battery Construction

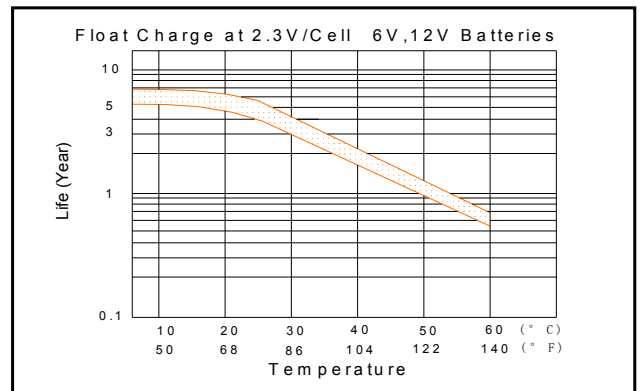
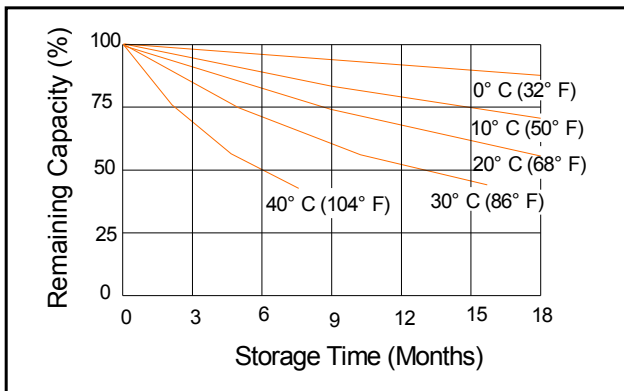
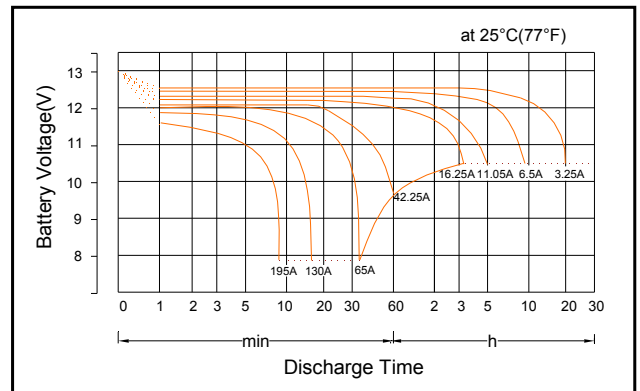
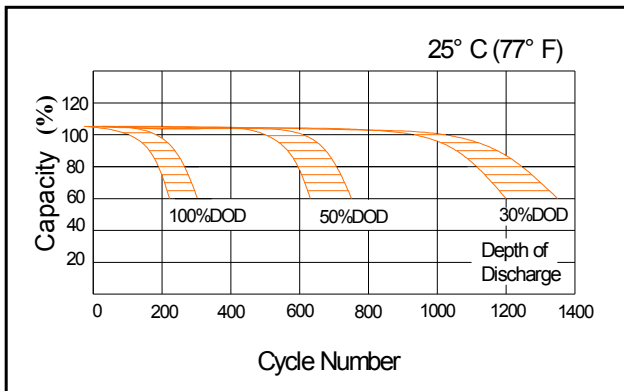
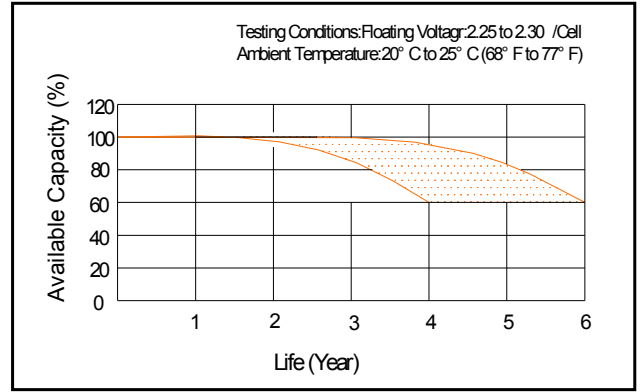
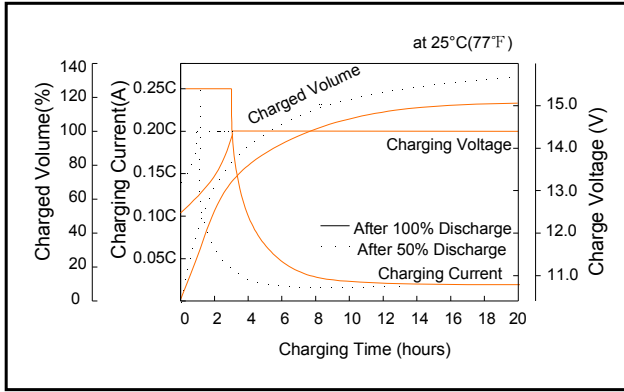
| COMPONENT    | Positive plate | Negative plate | Container | Cover | Safety valve | Terminal | Separator  | Electrolyte   |
|--------------|----------------|----------------|-----------|-------|--------------|----------|------------|---------------|
| RAW MATERIAL | Lead dioxide   | Lead           | ABS       | ABS   | Rubber       | Copper   | Fiberglass | Sulfuric acid |

### Charging Methods

| Application              | Charging method   | Charging Voltage at 25°C | Temperature compensation coefficient of charging voltage | Max.charging current | Charging time 25°C(h) |               | Temp (°C)          |
|--------------------------|---|--------------------------|--|----------------------|-----------------------|---------------|--------------------|
|                          |   |                          |  |                      | 100% discharge        | 50% discharge |                    |
| For standby power source | Constant voltage & Constant Current Charging (with current restriction) | 13.4-13.8V               | -20 mV/°C  | 19.5A                | 24                    | 20            | 0~40<br>(32~104°F) |
| For cycle service        |   | 14.5-15.0V               | -30 mV/°C  | 19.5A                | 16                    | 10            |                    |

\*Temperature compensation of charging voltage is not needed when using the batteries within 15°C to 35°C range.

**SH12-65 12V65Ah**



**Discharge Constant Current (Amperes at 77°F/25°C)**

| F.V/Time | 5min   | 10min  | 15min  | 30min | 45min | 1h    | 2h    | 3h    | 5h    | 8h   | 10h  | 20h  |
|----------|--------|--------|--------|-------|-------|-------|-------|-------|-------|------|------|------|
| 1.60V    | 227.50 | 182.00 | 130.00 | 74.75 | 53.30 | 42.25 | 22.75 | 16.45 | 11.18 | 7.35 | 6.11 | 3.32 |
| 1.65V    | 221.00 | 175.50 | 123.50 | 73.45 | 52.65 | 41.93 | 22.56 | 16.38 | 11.12 | 7.35 | 6.11 | 3.32 |
| 1.70V    | 208.00 | 162.50 | 117.00 | 71.50 | 52.00 | 41.60 | 22.43 | 16.25 | 11.05 | 7.28 | 6.05 | 3.25 |
| 1.75V    | 182.00 | 136.50 | 110.50 | 67.60 | 51.35 | 40.95 | 22.10 | 16.06 | 11.05 | 7.22 | 6.05 | 3.25 |
| 1.80V    | 162.50 | 117.00 | 104.00 | 58.50 | 50.70 | 40.30 | 21.45 | 15.60 | 10.92 | 7.22 | 5.92 | 3.19 |

**Discharge Constant Power (Watts/cell at 77°F/25°C)**

| F.V/Time | 5min   | 10min  | 15min  | 30min  | 45min  | 1h    | 2h    | 3h    | 5h    | 8h    | 10h   | 20h  |
|----------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|-------|------|
| 1.60V    | 414.05 | 332.15 | 239.40 | 144.95 | 101.40 | 81.25 | 43.68 | 31.72 | 21.58 | 14.24 | 11.90 | 6.50 |
| 1.65V    | 397.15 | 318.50 | 226.20 | 139.75 | 100.10 | 79.95 | 43.42 | 31.53 | 21.45 | 14.17 | 11.83 | 6.50 |
| 1.70V    | 378.30 | 299.65 | 215.61 | 133.25 | 98.80  | 79.95 | 43.03 | 31.40 | 21.32 | 14.17 | 11.83 | 6.44 |
| 1.75V    | 331.50 | 252.85 | 203.65 | 125.45 | 97.50  | 78.65 | 42.45 | 31.01 | 21.32 | 13.98 | 11.70 | 6.31 |
| 1.80V    | 295.75 | 227.50 | 191.75 | 108.55 | 96.20  | 77.35 | 41.15 | 30.10 | 21.13 | 13.98 | 11.51 | 6.18 |